

[CLAIMS]

1. A method of making a heat-sensitive lithographic printing plate precursor comprising the steps of
 - (i) providing a web of a lithographic support having a hydrophilic surface;
 - (ii) applying a coating comprising a phenolic resin on the hydrophilic surface of the web;
 - (iii) drying the coating by supplying heat to the coated web;
 - (iv) an active cooling step wherein the web temperature is reduced at an average cooling rate which is higher than if the web would be kept under ambient conditions but not higher than 30°C/s;
 - (v) winding the precursor on a core or cutting the precursor into sheets.
2. A method according to claim 1 wherein the average cooling rate is not higher than 20°C/s.
3. A method according to claim 1 wherein the average cooling rate is not higher than 10°C/s.
4. A method according to any preceding claim wherein at the beginning of the cooling step the web temperature is higher than T_g, the glass transition temperature of the coating comprising the phenolic resin, and wherein during the cooling step the web temperature is reduced from T₁ to T₂, T₁ being higher than T_g and T₂ being lower than T_g, at an average cooling rate which is lower than 10°C/s.
5. A method according to claim 4 wherein during the cooling step the web temperature is reduced
 - in a first phase down to T₁ at an average cooling rate of at least 10°C/s; and
 - in a second phase from T₁ to T₂ at an average cooling rate which is lower than 10°C/s.

- 25 -

6. A method according to claim 4 wherein during the cooling step the web temperature is reduced
- in a first phase down to T1 at an average cooling rate of at least 10°C/s; and
 - 5 - in a second phase from T1 to T2 at an average cooling rate which is lower than 10°C/s; and
 - in a third phase from T2 to about ambient temperature at an average cooling rate of at least 10°C/s.
7. A method according to claim 4, 5, or 6 wherein the cooling from
- 10 T1 to T2 proceeds at an average cooling rate which is lower than 5°C/s.
8. A method according to any of claims 4 to 7 wherein T1 is Tg+20°C and T2 is Tg-20°C.
9. A method according to any of claims 4 to 7 wherein T1 is Tg+10°C
- 15 and T2 is Tg-10°C.
10. A method according to any of the preceding claims further comprising a heating step between step (iii) and step (iv), wherein during said heating step the web temperature is maintained above the glass transition temperature of the phenolic
- 20 resin during a period of between 0.1 and 60 seconds.